

Appln. No.: 10/558,938
AMENDMENT A
Reply to Office Action of January 7, 2009

Attorney Docket: 3827.142

REMARKS

Status of Claims

Claims 1-10 were under examination.

The preferred limitation from claim 4 has been removed to new claim 11.

Thus, claims 1-11 are presented for examination.

Claim Rejections - 35 USC § 112

Claims 1-10 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants first would like to thank the Examiner for the very careful attention to the claims and for the useful suggestions for improvements. Applicants herewith amend the claims from "European format" to "US format".

Claims 1-5 are vague and indefinite. It is unclear if the claims are directed to the pumping system or to just the control device. Furthermore, line 22 and 26 also refer to a device responsive to the signals and controlling the reversible drive pump. It is as written unclear if this is intended to be the same device which the claimed invention is directed to or a subcomponent of the larger control device.

In response, the claim has been revised to claim the pumping system, which pumping system includes a control device.

In claim 1 line 6 the phrase "via hydraulic dive cylinders control by the reversible pump" is confusing. The examiner would suggest replacing "control" with "driven".

Claim 1 has been amended.

Claim 1 recites the limitation "its inlet side" and "the outlet side" in lines 8, 9 and 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 has been amended.

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Claim 1 recites the limitations "the rod ends" and "the base ends" in lines 19 and 20. There is insufficient antecedent basis for this limitation in the claim. Furthermore, there is no antecedent basis for a "rod" in the claim.

Claim 1 has been amended to provide antecedent basis. Regarding the fact that there is no "rod" in the claim, this is not material, it is sufficient to define the hydraulic drive cylinders (5, 5') as having two ends, one of which is to be referred to as the rod end, the other end of which is to be referred to as the base end.

In claim 1 lines 22 and 23 are confusing because the outlet of a "selected" switch sensor is referred to. The claim sets forth plural switch sensors and it is unclear which would be the selected switch and how this would be determined.

In response, Applicants point out that the minimum number of sensors is two, that if there are two sensors, they could be arranged with one at opposite ends of one cylinder, or with one at the rod end or base end of each of the two cylinders, the result would be the same – the sensor would provide a signal, and the signal could be used to indicating that the a piston stroke was nearing an end and that it was near time to reverse. However, regarding the term "selected", this term is believed unnecessary and thus it has been deleted.

Additionally in line 23 the claim sets forth that the device "switches or reverses the reversible pump". This is confusing because the pump is only set forth as being reversible. It is unclear if a reference to the pipe switch is being made.

The Examiner is correct, the words "switches or" has been deleted. Reversing of the pump also causes the pipe switch to reverse.

In claim 2 line 3 the phrase "the time of the piston passage at the location of the cylinder switch sensors" is confusing. The examiner believes that a time for piston travel between the sensors was intended.

In response Applicant explains that the term "passage" was intended to refer to the point in time that the piston is detected as passing by a switch sensor. Applicants believe that claim 2 is rendered more clear by amendment to "the time of the piston detection passage at the location

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of the cylinder switch sensors".

In claim 2 line 4 and 5 it is unclear if the limitation of "a therefrom derived initiation time" is the same as the "derived initiation time of claim 1.

Applicants affirm that it is the same time, and have amended claim 2 for clarity.

In claims 4 and 5 there is no antecedent basis for the "derived initiation point". The examiner believes these claims should be properly dependant upon claim 3 which introduces this limitation.

In response, all "points" actually refer to points in time, not points of travel, and the claims have been amended for consistency.

Regarding claim 4, the phrase "preferably input via a remote control" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention.

In response, the preferred limitation has been removed to new dependent claim 11.

In claim 6 line 6 the phrase "via hydraulic drive cylinders control by the reversible pump" is confusing. The examiner would suggest replacing "control" with "driven".

Claim 6 has been amended.

Claim 6 recites the limitation "its inlet side" and "the outlet side" in lines 8 and 10. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 has been amended.

Claim 6, line 14 recites the limitations "the rod and base side ends" in line 14. There is insufficient antecedent basis for this limitation in the claim. Furthermore, there is no antecedent basis for a "rod" in the claim.

Claim 6 has been amended to parallel claim 1.

In claim 7 line 5 the reference to "the initiation point" is confusing. An initiation time point had previously been set forth in claim 6. The removal of "time" makes it unclear of the same point is being referred to or if a position of initiation is being newly claimed. For similar reasons claim 8-10 are also confusing.

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In response, all "points" actually refer to points in time, not points of travel, and the claims have been amended for consistency. The specification provides an explanation of switching-over times, which are not instantaneous, and in a two second stroke, may require 0.1 seconds, which is 5% of the stroke.

In claim 8 line 3 there is no antecedent basis for "the selected ... sensors" and it is unclear how the selection was made.

In response, the term "selected" is deleted as unnecessary, with the explanation for how the selection was made being the same as given for claim 2 above.

In claim 9 line 5 there is no antecedent basis for "the computed movement sequence". Further, in claim 9 line 6 is confusing. Claim 9 is a method claim and the phrase "taking into consideration a thereby modified brake time", makes the claim unclear because as worded it is unclear if the applicant intended the computation step of determining the modified brake time to be part of the method.

In response, Applicant carefully reviewed and revised claim 9. The "computed movement sequence" simply refers to the model of the piston location over time. Basically, as a remote control input as to the pumping amount is changed, so that pumping is either accelerated or decelerated, it follows that the time needed for each stroke, including the time required for braking of the cylinder prior to reversal, is also changed. Thus, for a slower moving piston, the brake time associated with the changed movement of the piston over time is greater, and with a faster moving piston, the brake time associated with the changed movement of the piston over time is shorter.

In claim 10 line 4 there is no antecedent basis for "the collective.piston speed" and it is unclear what this variable represents.

In response, the two alternatives for determining piston speed (actual vs. derived) have been removed from claim 10 as unnecessary.

Indicated Allowable Subject Matter

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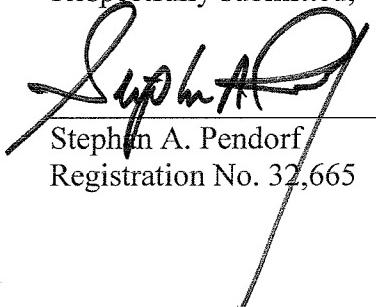
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Applicants appreciate the indication that claims 1-10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. §112, 2nd paragraph. Applicants have carefully reviewed and revised all claims and believe that the claims are now in condition for allowance.

The Commissioner is hereby authorized to charge any fees which may be required at any time during the prosecution of this application without specific authorization, or credit any overpayment, to Deposit Account Number 16-0877.

Should further issues remain prior to allowance, the Examiner is respectfully requested to contact the undersigned at the indicated telephone number.

Respectfully submitted,


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